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REASONS

FOR PROMOTING THE CULTIVATION

OF THE

NEW ZEALAND FLAX.

BY

F. DILLON BELL

AND

FREDERICK YOUNG JUN.

LONDON:
SMITH, ELDER AND CO., CORNHILL.
1842.

Price One Shilling.

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REASONS,

&c. &c.

It is surprising, that although so much concurrent testimony has been adduced in proof of the great importance of promoting the cultivation of New Zealand flax, the subject has met with such a small share of encouragement here with a view to practical results. Almost every arrival from the Colony has brought renewed assurances of the settlers' confidence in the success of a systematic attempt to cultivate and prepare for a market its chief indigenous production; but these assurances are always accompanied with expressions of regret that such an attempt has not been made. Many causes, unconnected with the peculiar subject of the cultivation of the *phormium tenax*, have operated to occasion the long delay that has taken place without any experiments being undertaken on a large scale; but the principal cause has been the want of the necessary machinery for properly preparing the fibre. The settlers at Wellington —for New Plymouth and Nelson are not yet old enough to have had much experience on the subject,—although fully alive to its importance, have been unable to devote the time and means which are required to ascertain the best mode of bringing the *phormium tenax* into the market: and while they have clearly seen the prospective advantages, as well individually as to the Colony at large, of a speedy application of such a method, they have been necessitated to look more sharply after their present interests, and have thus neglected future benefit in the engrossing occupations of the moment. It is true that at one time the subject had kindled a kind of enthusiasm in the settlement; and a public meeting was held, and subscriptions to a considerable amount were entered into for the purpose of giving adequate encouragement to persons willing to devote their attention to the question. A premium was offered for the discovery of a machine suited to the preparation of the fibre; and we began to congratulate ourselves in England on the progress of the colonists' feeling. Since that time, however, a "change has come o'er the spirit of their dream;" and the anxious hopes of many, who had looked for a fulfilment of the anticipations excited by these proceedings, were disappointed to find, on each arrival, that the colonists were as far as ever from any advancement in the matter.

Nor does it seem likely—for some length of time at least—that the subject would be taken up in the Colony in the manner which its intrinsic importance and great prospective value deserve. We read that Mr. Francis Molesworth realised no less than 12*l.* per ton for potatoes, of which he had raised twelve tons per acre, thus returning him an amount at the rate of 144*l.* per acre for his produce; and although such instances of good fortune will of course be rare, and may probably not occur again, yet the return which will continue to be obtained from agricultural as well as commercial pursuits, will be too tempting to admit of a speculation, such as an experiment on a large scale for cultivating, preparing, and *disposing of* the *phormium tenax* would be. It seems, therefore, that on the friends of the Colony in England has devolved the part of stepping in to make that experiment, and of "bringing forward" the New Zealand flax as an available article of commerce, under such circumstances as may ensure it the largest practicable measure of success. The object of these pages is to draw the attention of the "New Zealand public" in England,—and particularly of the large and influential class of persons more immediately connected with the Company's settlements,—to the question, with a view to practical measures being adopted at an early period. We do not profess to lay down the mode for overcoming the acknowledged great difficulty, namely, a proper preparation of the fibre; but in submitting the following facts and opinions,—carefully collected from those given by men whose opportunities of judging entitle them to consideration and credence,—we trust to show sufficient ground for our conviction that the experiment may now be made on an extensive scale and under systematic arrangements, in a manner at once to confer benefit on its supporters, and to call into existence a staple export as inexhaustible as it would be valuable. The attempt, if successful, would not only produce incalculable advantages to the settlements, but would give to all interested in the colonization of New Zealand the strongest assurance of the resources of the Colony, and of its future greatness and stability.

The neglect of which we complain is the more remarkable, because considerable encouragement has at various periods been held out in different ways for promoting the object in view. So early as the year 1819, small and large ropes were manufactured from the *phormium tenax* at the Portsmouth dock-yard: in 1834, the Society for the encouragement of Arts offered a premium of fifty guineas for a substitute for hemp, to be grown in one of the British Colonies, and directed particular attention to the New Zealand flax:* and again, in 1834, Mr. Marsh, chemist at the Royal Woolwich Arsenal, reported favourably of sail cloth, &c. which had been prepared in a particular way. In the year 1831, the Government contracted for 800 tons of New Zealand flax, to be tried in the Navy. The reports of many of the naval officers who had tested rope and canvass made from it, were published in the Appendix to the Report of the Lords' Committee on New Zealand of 1838; and notwithstanding the widest discrepancy exists in their statements, the unequivocal testimony given by several in favour of the flax would go far, even were no other evidence at hand, to convince a careful and impartial examiner, that in a great many (if not the majority) of the cases in which unfavourable reports were made, the failure or disappointment was attributable rather to a defect in the preparation or manufacture of the article, than in the flax itself. This view of the case is forcibly borne out by the evidence of gentlemen examined before the Lords' Committee, who almost unanimously agreed in the opinion that no successful method of preparation had yet been applied; but that *if properly prepared*, the flax would be an article of great value in trade. We call particular attention to the following extracts from the Report referred to:—

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* See Transactions of Society for encouragement of Arts, Manufactures, and Commerce, vol. xlii. p. xl. (preface), also pp. 18 and 185. (1824).

Mr. J. G. Nicholas, who was examined before the Committee states—

"The New Zealand flax is exceedingly valuable; it is spread over the country in great quantities, and would form a very valuable article of trade with this country. It thrives exceedingly well; and when properly prepared has been found to produce stronger rope than that made of the hemp of Russia, or any other country; and also the canvass made of it is of a very superior description."

Mr. Charles Enderby, an extensive rope and canvass manufacturer, says—

"It is brought to this country in a very rough state, which is the cause of its never having been generally introduced. It has been manufactured in a variety of ways. . . . There has been a great prejudice against the flax, in consequence of its having been badly prepared. . . . In our firm we prefer it to Russian hemp. It costs us much less than the Russian hemp does; not per ton, but because the same length is lighter—it does not weigh so much per ton. It is more costly, but we can get for the same weight an increased length and an increased strength, . . . It has been manufactured with a species of caoutchouc, or india rubber: but when immersed in water the caoutchouc separates from it and floats at the top, so that the fibre is no longer protected. We have combined a composition of caoutchouc with tar, and find that answer. . . . We worked Captain Harris's patent for some time. At first we were extremely favourable to it: the fibre was extremely soft, and the cordage softer than cordage generally is; but we found the whole of the solution separate from the flax, and it was condemned. . . . Afterwards we introduced tar. But the prejudice was so strong against the flax, that it is a very difficult thing to introduce it again to parties who are so prejudiced against it. . . . We have not tried it with Kyan's patent. We use it for whale lines: we prefer it for whale lines to any other description of rope, and the whale lines are the most important lines we have in our vessels. A whole school of whales may be lost by the parting of a single line.

Property to the amount of 2000*l.* or 3000*l.* may perhaps depend on a whale line. . . . For whale lines it is preferable to any other. I prefer it on account of its strength and pliability. . . . It is liable to suffer from the way in which it is packed. In doubling it, the part outside, if wet gets to it, is destroyed."

Captain H. FitzRoy, another witness, observes—

"If properly manufactured, the New Zealand flax would make very good rope;—but there has been some defect in the way in which it has been manufactured, for it breaks in the 'nip.' It wears a very long time in a straight line, but whenever it is much bent it gives way. Yet, as the natives use it for nets, three or four fathoms deep and sometimes two or three hundred fathoms in length, and it lasts them for many years, there must surely be some way of preparing it which would make it available for our rope. A net made in that way is kept by a family in the stump of a tree, on a little frame made for it, and it lasts them for many years. . . . It may be very possible, that it may lose some particular quality and become brittle from the defective mode of packing, and its heating, in consequence, on the voyage home."

The following is an extract from Mr. Ward's "Information relative to New Zealand," published in 1839:—

"The flax plant, says Mr. M'Donnell, grows in wild luxuriance throughout the three islands of New Zealand; it is indigenous to the country, and perennial: the leaves averaging from six to ten feet in length. The plant throws an abundance of seed. The hill-flax is of a finer texture, whiter, and stronger, than that grown in the valleys, though the staple may not be quite so long. With attention to the cutting of the flax in the proper season, and common care paid to its cultivation, I feel convinced of its superiority over that of Russia and Manilla; it possesses all the flexibility of the former, and is free from the wiry brittleness of the latter. I can have no hesitation in asserting that thousands of tons of this valuable article of commerce may be shipped off annually from New Zealand to the mother country; nor do I assert this merely from my own observation and knowledge of the country, but I am borne out by the information that I have received from several of the chiefs and intelligent natives, with whom I have conversed on this subject. Fair play has not generally been given to the flax sent home *viâ* Sydney; in many instances the plant has not been cut in the proper season—a very material point, for then the flax is coarse and wiry, the fibres ragged and not easily cleaned, the staple short, and the colour foxey. Another cause that has operated to render the New Zealand flax objectionable at home, is the twisting of the staple in packing, which prevents the flax hackling freely: not packing it thoroughly dry, and allowing the pressure of the screw to be on the bend. Cut the plant at the right season, let the flax be well dried, carefully packed in lengths, and screwed; then the superiority of the New Zealand hemp over that of Europe will be manifest, and those prejudices that once existed will vanish for ever. All the standing and part of the running rigging of the *Sir George Murray*, a ship of 400 tons, belonging to myself, was laid up from New Zealand flax: it had been over the mast-head for nearly three years. I can state, that better rope never crossed a ship's mast-head. I have experienced some severe gales in the *Sir George Murray*, consequently the rigging had been well tried; when lifted and examined it was found (barring being slightly chafed) as good as when first put over: the running rigging wore uncommonly well. Cordage and fishing lines, made from good New Zealand flax, has been proved to be far more durable than any made from European hemp."

Abundant testimony might be adduced in support of these statements, and to prove that the *phormium tenax* has throughout been recognised as an article which, under proper management, would be of large commercial importance. And with regard to the Government contract to which we have before alluded, we believe it is now notorious that although the Government agreed to pay upwards of 40*l*. per ton for the flax, a very considerable portion of the shipments made by the contractor came home to this country in a state utterly unfit for manufacture, no regard having been paid to the proper separation of the fibre from the plant, and no pains whatever having been taken in the packing. Many subsequent attempts at manufacture have been made by persons in England, as well as in New Zealand and Sydney, which have in some cases proved entirely successful, and in others a complete failure. We are assured that in these instances, as in that we have just described, the great cause of failure has been from defective preparation, and not from intrinsic defect. Perhaps no better evidence can be brought forward of this than the fact that there are now many manufacturers who would gladly receive supplies of the flax, provided they could feel confident that the preliminary preparation would be so conducted as to ensure its coming to this country in a proper state. Of this fact we are ourselves personally cognisant, and we have no doubt that many of our readers are equally aware of it.

The experience of the last few years has amply corroborated the opinions we have just quoted; and the closer examination consequent on the establishment of settlements has supplied us with many important details. It may not be uninteresting to give here a short account of the plant itself.

The *phormium tenax* is altogether a different plant from the European flax; it resembles the garden iris, but has a very large leaf, sometimes more than ten feet long and six or seven inches broad. It springs up in large bunches or tufts, and bears a flower of a yellow or reddish colour, which gives place to long pods filled with shining black seeds. The flower resembles honey to the taste, and is most refreshing. The natives universally suck it; and we have ourselves heard persons, who have recently visited New Zealand, say that they have eaten it with great relish. There are several varieties of the plant, and it will be an important object to ascertain which sort will yield the largest return, or whether the different species should be made available for different purposes. Its chief peculiarity consists in the fibre being obtained from the leaf, and not, as is the case with European flax, from the stem: the outside coat of the leaf being stripped, the fibres are perceived running parallel to one another through its whole length. Hitherto the only mode of preparation by the natives has been a rough scraping of the outer coat of the leaf; of course this rude method very imperfectly frees the fibre, and more or less injures it. In addition, however, to this outer covering, there is a thin glutinous substance which must be also removed before the fibre is thoroughly cleaned. This obstacle has been the chief one up to this time; and the imperfect manner in which this second process has invariably been accomplished, accounts at once, in a great measure, for the unsuccessful results which have been obtained.

The flax grows wild in almost every part of New Zealand, in the greatest luxuriance: the two principal varieties being the small-leafed, which is chiefly found on high land, and called "hill flax," —and the large-leafed, which grows on the banks of the rivers or in swampy places. The latter attains to an enormous size, but does not contain so much of the fibrous substance in proportion to the leaf, as the smaller growth; hence, it has been thought that it will pay better, for a time at least, to cultivate the small species. However, there can be no doubt that the quantity as well as the quality of the fibre, will be greatly improved by proper cultivation. In Europe, flax is considered an exhausting crop for the soil if allowed to run to seed, but not if pulled early; and if due attention should be given in New Zealand to the allotment of space for each plant, and to the seasons at which the crop should be made, the same piece of land would doubtless produce a much larger quantity of fibre than at present, while the quality would be much finer. The leaves can be cut twice a-year, the root remaining in the soil for reproduction.* As is well known, it has been in universal use among the natives from time immemorial; formerly they appear to have cultivated it with some care, but now they take no pains whatever in cultivation, and the whole growth is spontaneous. It has been adapted to every kind of use by them: their huts are thatched with it, their mats and other articles of clothing are made of it, as well as baskets and other domestic utensils, fishing nets, &c.

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* A given quantity of *phormium tenax* will contain more of the fibrous substance than an equal quantity of Russian hemp, (and, we believe, European flax either) on account of its lighter intrinsic weight.

With this short description of the plant, we proceed to lay before our readers the substance of more recent statements of persons who had personally examined it, and are competent to form a judgment on the means to which it can be applied. We do not apologise for the length of the extracts subjoined, because they will doubtless be read with much interest; and even to those who have met with them before separately, it may be pleasing to compare them together at one view.

We shall commence with the Hon. H. W. Petre.* After noticing the other productions of the colony, he proceeds:—

"The production which I think is likely to yield a larger profit than any other, and is therefore better calculated to engage the attention of the colonists, is the *phormium tenax.* This plant grows in great abundance in every part of New Zealand. No soil seems to be unsuited to it; but as there are several varieties of this indigenous plant, it yet remains to be ascertained which is the best species, and on what soils it may be most beneficially grown. The earlier trials of the New Zealand flax will most likely be made from the wild plant, but as soon as it becomes an article of exportation it will be cultivated. My reason for so thinking is, that the number and great difference of the sorts must cause a considerable mixture of inferior with the superior qualities. Hence it will be necessary to discourage the one, and encourage the other. At present it would require much ground to be travelled over to collect the finest sorts only; by cultivation they would be always at hand, as none other would be worth the labour and expense.

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* "An Account of the Settlements of the New Zealand Company:" published by Smith, Elder & Co. This interesting work has been very widely read, having already passed through five editions.

"On the 24th of December, an advertisement, signed by several persons of known enterprise, was published in the *New Zealand Gazette*, calling a public meeting for January 4th, to form an association to discover the best method of preparing New Zealand flax for exportation, and 'all interested in the future prospects of the colony' were requested to attend. In anticipation of this meeting a statement was drawn up by a gentleman who had made the subject his study for some time, and I believe had been engaged in the growth of flax in Ireland. I have no means of verifying his calculations, as I myself have neither made nor witnessed the making of any experiments, but I believe them to have been conducted with care; and as far as any thing can be relied on in the present imperfect state of our information, I think the statement which follows is entitled to confidence.

"'The native hemp, or *phormium tenax*, is the article of local produce which of all others can, with least delay, and least capital, be rendered fit for export in large quantities. It can be procured in a state fit for making cordage within six months from the present time, if an adequate capital be immediately raised, and proper machinery be erected and set to work. It can be prepared in any required quantity at a price which would command an extensive and ready sale, and, at the same time, leave a large profit to those engaged in the trade of preparing it. As a rough estimate of the nature of this important article, I beg to submit the following calculations for consideration.

"'Let it be supposed that in a flax farm of 100 acres in extent, each plant should occupy a space of two square yards, or a square of nearly fifty-one inches in the side, the total number of such plants to an acre, would be 2,420; take as an average each plant to yield 12 lbs. of the fresh-cut green leaves per year, this would give rather more than 2,900,000 lbs., or about 1,296 tons, annually, of fresh-cut leaves off a farm of 100 acres extent.

"'I have prepared a small quantity of the fresh-cut leaves, by way of experiment, and the result enables me to state, that about one-fifth of the gross weight of green leaves, prepared according to my plan, can be had of hemp, in a fit state for making good ropes or cordage: besides which, a quantity of coarse tow, equal to about half the weight of the fresh-cut leaves, is obtained in the operation of cleansing the hemp of short fibres and pulp. There would, therefore, be procurable from such a farm, about 250 tons of hemp in a proper state for the ropemaker's use, and about 600 tons of coarse tow, fit for making ropes of inferior quality, and of coarse packing canvass. This coarse tow would, if sold as low as 3*l.* per ton, almost pay the whole first cost of the prepared hemp, including rent, expense of cultivating and procuring the raw leaves, and the wages of the operatives engaged in the preparation of it. The hemp, if sold even so low as 15*l.* per ton, would be nearly all profit, as the cost of procuring it would be almost, or altogether, covered by the value of the tow. A capital of no more than 5,000*l.* would be sufficient to set on foot an establishment capable of turning out from 600 to 700 tons annually, and in any case, would pay full 80 per cent. profit on the value of the hemp sold.

" 'I am of opinion that an establishment of the kind, having extensive rope-walks in connexion with it, would be one of the best paying investments of capital which can possibly be made in this place. I shall send a sample of the prepared hemp, for your further satisfaction.'

"This is certainly a brilliant promise; but although I will not venture to anticipate what profit the future cultivator of New Zealand flax is likely to realize, I have a very strong conviction, that it will be our staple article of export; and that, like the wool of New South Wales, its profitableness will be such as to make it not worth while, for many years to come, to invest capital in any other exportable commodity. I ground my opinion chiefly on the large European demand, and on the great variety of purposes to which our flax may be applied. It combines the qualities of hemp and flax, some samples having the strength of the former, and others having the fineness of the latter. Cordage and coarse sail-cloth are made from the strongest kinds, whilst some samples I have seen, have been of a silky texture, and I believe that in France, cambric has been made from it, of great delicacy and beauty. It has also been manufactured into paper of excellent quality, both in this country and in France.

"Soon after the meeting, a select committee was appointed to receive specifications of inventions, and to report upon the same. The committee was bound not to divulge any invention that was made known to them, in order that those who were not fortunate enough to secure the favourable opinion of the committee might not be prejudiced, but might avail themselves of any advantages which their invention should enable them to secure. No report had been made by this committee when I left Port Nicholson; but I understood that several inventions had been submitted to them, which promised to fulfil the desired object—that is, to reduce the flax to such a state as will permit it to be exported without being liable to injury during the voyage. As to the nicer processes necessary to bring it into a state fit for manufacture, it will be probably more advantageous to perform them in this country, where they can be effected much more cheaply. The great object is to separate the fibre from the refuse portions of the leaf. If this be not done, the fibre, that is, the flax itself, will heat in the packing, and become useless; but if the fibre be free from the refuse a little more perfectly than the natives are in the habit of doing, there will be no danger of its heating, as that which is even rudely dressed by the natives very seldom heats, and then not to a great extent.

"In Sydney the New Zealand flax is held in great esteem. It is invariably made use of where much strength is required, as, for instance, for whale lines. Before I left Wellington, string was manufactured from flax dressed in a peculiar way —I believe chemically, and not mechanically. This would do for string or twine well enough, but hitherto chemical processes have had the effect of weakening the fibre, and therefore have not been adopted or encouraged. Since my departure I find that cordage, string, and door-mats have been manufactured at Wellington for home consumption.

"There is no limit to the extent to which flax may be raised by means of cultivation. It has been shown in the above extract, that the return for a given outlay will probably be large, and the quantity which a given space will yield is inconceivable to those who have not witnessed it. It is not like a plant which merely yields a fruit or a seed; the whole plant itself is crop, every leaf yielding produce."

The following remarks of Mr. Heaphy are worthy of special attention, because his explorations of many districts gave him superior opportunities of judging of the value of the *phormium tenax*. He resided for more than two years in the country, and has lately returned there after completing the business which brought him to England. He says:—

"Of the principal articles which New Zealand does at present, or is shortly likely to export, the flax is certainly the most important. It is found in every part of the country, and flourishes alike in dry or swampy ground. No pains have ever yet been taken in its culture; and indeed but little are necessary, so luxuriant is it in its wild state. The form of the plant is very different to that of the European flax; it resembles the 'flag' or 'iris' in shape, but is much larger in growth. Some which I saw on the river banks in the Nelson country measured fourteen feet in length, with a breadth in the leaf of six inches. Allowing one bush to have about a hundred leaves, it will occupy a square of six feet of superficial area, or 1210 plants will cover an acre. It is not, however, probable that the largest species of flax would be cultivated; as that of smaller growth, which is found on high land, has a greater proportion of the fibre to the vegetable substance which surrounds it, and is more easily dressed. Of the smaller kind, about 2,500 plants would cover the acre. As Mr. Petre's recently published work on the New Zealand settlements contains an able calculation of the produce of flax farms, together with an account of all that had been done in Port Nicholson towards discovering a successful method of preparing the fibre, I shall only mention a few circumstances which have fallen under my notice, relating to its growth and capabilities.

"An idea of the quantity of fibre contained in one leaf may be obtained from the mention of the fact, that I have seen a native prepare and twist the hemp of one leaf, of the largest kind, into a cord ten feet in length and of the thickness of a pencil. Since my return to England, I have had an opportunity of trying the strength of a piece of New Zealand cord, brought to England by a gentleman who accompanied Flinders in his voyage of discovery; and which I found to be equal to that of a piece of new English string of the same size.

"The best flax districts in the estimation of the natives, are near to the sea-shore; and, according to their accounts, it grows finest at Taranake, and along the shore of the Strait to Port Nicholson. The most luxuriant growth of the plant which I have seen, was at the head of Tasman's Gulf, in the country now occupied by the Nelson settlement; which in my idea is the finest flax district in New Zealand. At the last mentioned place, on account of the country being of an open nature and abundantly watered, it is met with in very great quantity. The hill flax is met with on the steepest and most exposed part of the coast, where the soil is not of sufficient depth to produce any other kinds of vegetation; and in consequence of this, its culture and exportation will cause a value to become attached to land which would be otherwise worthless.

"The manufacture of the flax has already commenced at Wellington; and many vessels have been supplied with cordage, &c. from it. By an Auckland newspaper, lately arrived, I find that two tons of rope of various sizes had been made at Kaipara, and forwarded to the former place for sale. Several country sections have been chosen on the sea-coast near Port Nicholson for flax farms, on land that would not, from its exposed situation, produce grain, or be adapted to general agriculture.

"The great want now is, the application of a successful method for preparing and packing the flax; and I cannot suppress my desire to see some attempt made in England to supply this deficiency. If proper attention could be attracted to this subject, it is more than probable that some efficient plan would speedily be devised, by means of which the colony would at once become independent of the success of other branches of agriculture; and by opening an immediate trade between it and the mother country, would make a quicker progress towards that completeness of settlement and substantial prosperity, at which other colonies have been comparatively long in arriving."

We conclude our extracts with the following observations of Mr. Charles Terry:—

"In all previous publications and accounts of New Zealand, two natural indigenous products have been put forth, as certain and inexhaustible sources of wealth to the future colonists;—these are *timber* and *flax*. . . . The flax may become, eventually, the staple of the colony, as wool is of New South Wales. It is indigenous, and is found all over the island in inexhaustible supplies; for the leaves can be cut twice a-year, leaving the parent root for re-production; and if the plants were cultivated by off-sets (for it is a bulbous root) at proper distances, and the intervening spaces kept free from fern and other shrubs, there is no doubt but the quality of the fibre would be improved, as well as the quantity very much increased. . . . The fibre is obtained by separating it from the external epidermis of the leaf in a green state, by means of a mussel-shell, and then exposing it to the air for a few days, which bleaches the flax and dries the thin inner epidermis; which the natives, on the flax they sell, very imperfectly remove, and which has tended so much of late years to depreciate its value and diminish its consumption in the Sydney and European markets. In heckling and properly freeing the flax from the particles of this coating and substance, there is a loss in quantity of 25 per cent. exclusive of the trouble and expence."

Speaking of the Government contract, he says—

"It is probable, that the unclean state of the flax when imported into England may have occasioned great trouble to the Government rope-makers, in heckling out the tow and freeing the fibres from the particles of the inner epidermis adhering to them, and which, if not properly and fully done, would operate against the due proportionate tension and wear of the strands, more particularly if they were carelessly or imperfectly laid."

We trust we have shown sufficient ground, on the evidence we have submitted, for our conviction that the *phormium tenax* is capable of being brought into this country in such a state as to ensure it a ready and extensive sale: and we have only to add our belief, that the only way effectually to carry out this object is by supplying the means from England. The thing can be done, we are sure; let us see how.

It appears certain that individual enterprise, even if aided by a considerable capital, would not succeed in accomplishing the object in view,—a systematic importation of the flax. There are now many persons, in different parts of the colony, who have succeeded in manufacturing good rope and other articles: but this has uniformly been on a very limited scale, and has been accomplished, we believe, chiefly by manual labour; so that it may really be said that the flax has not been put to any extensive use by the colonists individually up to this time. It is true that if a person in England should be found willing to make the experiment on a large scale, and should proceed himself to the Colony for that purpose, he would in all probability find it a most profitable investment for his money, and succeed in raising a large quantity of produce for shipment to England:—but, even should he meet with the greatest success, he would not do what is now required. In order to make a market for the *phormium tenax* here, it is indispensable, not only that the supply should be considerable, but that it should be permanent; in short, that a steady and constant importation should be kept up. This, for many obvious reasons, cannot be ensured in cases of individual enterprise; and our opinion therefore is, that the object can best—if not only—be effectually served by establishing a company, which shall itself undertake the culture, preparation, and shipment of the flax, and import it for sale in England. A moderate capital would suffice for carrying out the plan in the fullest manner. It is difficult to come to any precise notion of the amount which would be required, but although the sum named by the gentleman quoted above by Mr. Petre,—namely 5000*l.*, might very probably be ample for conducting the first operations, we think that a much larger capital might be advantageously employed eventually. We are inclined to think that if it were fixed at 20,000*l.*, of which a moiety or less should be called for at first, it would not be too large.

We have already said that we do not profess to lay down the mode by which a proper cultivation and preparation of the fibre would be secured. The first object of the proposed Company, therefore, would be to ascertain the best mode, by close investigation on the spot, conducted by qualified persons, who should devote their attention exclusively to the subject. It may be objected to the formation of a Company at present, that this very want ought to be supplied before the Company is established, in order that it might then enter at once into the field of production. To this we answer, that the subject has been allowed to sleep on only because it was not energetically taken up here, and that it is as likely to sleep on still, if steps are not now taken to make the required experiment. We venture to urge, moreover, our conviction that the experiment would not fail; and we are therefore anxious that no more time should be lost in waiting to see "what will be done" by others. We present evidence to prove that while the great—perhaps the only—difficulty in establishing the value of the *phormium tenax* has been the want of proper culture and preparation of the plant, no effectual means have ever been attempted to obviate that want: and we cannot but feel persuaded, in the absence of any evidence—we think we may even say any statement—to the contrary, that there does exist a remedy, which would not long remain unknown, were perseverance, skill, and money applied to its discovery. On the presumption that this remedy would be available, there can be no doubt that, in a pecuniary point of view, the proposed Company would open a field for really profitable investment. We have seen that it was estimated at Wellington that if the flax were sold in this country for 15*l.* per ton, that amount would be nearly all profit, as the sale of the tow would cover the expences of production. We have no means of verifying this estimate; but we are not sanguine enough to place implicit confidence in it. At the same time, it is at least an approximation to the truth; and we may safely allow for a great deduction from such a calculation, and yet feel certain of realizing large profit. Besides, while it would doubtless be necessary, or at all events very expedient, to introduce the article into England at a very moderate price in the first instance, we may fairly look for a larger sum than 15*l.* per ton, when the European flax is about 40*l.* per ton in the market. Messrs. Enderby, who made considerable purchases at one time, paid from 17*l.* to 24*l.* per ton;* at that period also, a less price than was paid for other flax. From this we are justified in the expectation, that if on the one hand experience should diminish the estimate we allude to of the profit, so on the other hand we may be able to demand a higher price per ton than that contemplated. We have heard it stated as a grave objection, that the expence of freighting the flax home would be a serious drawback to the hope of successful competition with the European hemp and flax. A few words will set such a doubt at rest. The cost of freight from the Baltic is 52*s*. 6*d*. per ton, and we believe more from some other countries; and we cannot anticipate that the freight from New Zealand would exceed about 3*l*. per ton; the difference between the two being thus a point comparatively immaterial. On the whole, and looking at the question in not the most favourable light, it does appear to us that sufficient grounds exist for the anticipation that if the proposed Company should be established, very considerable profits would not fail of being realized. We should not omit noticing a point of some importance in connexion with our subject: the seed of the European flax is crushed for oil after the fibre has been obtained; and we do not recollect that any similar trial has been made with the New Zealand flax. If some varieties would not, others might, yield oil; at any rate the enquiry would be interesting.

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* See Mr. C. Enderby's Evidence before Lords' Committee.

It would be needless for us to enlarge on the advantages that would accrue to the mother country as well as to the Colony by the importation, at a cheap rate, of an article like the *phormium tenax*, inexhaustible in supply, and capable of competing successfully with the foreign production now in use. The benefit that would arise to England by being made in a great measure independent of a foreign supply of such an article must be obvious. We print at the end, Tables showing the quantities of hemp and flax imported into the United Kingdom from 1831 to 1840 inclusive. It will be seen that during these ten years, the enormous amount of 561,714 tons of flax and tow, and 339,149 tons of undressed hemp, were imported: of which no less than 557,124 tons of flax and tow, and 330,390 tons of hemp, were retained for home consumption,—being at the rate of 88,750 tons of hemp and flax per annum. It would perhaps be too sanguine to expect that New Zealand flax should displace, at first, any very considerable quantity of this immense importation: there are "vested interests" to be combated, there is prejudice to be removed:—but may we not look forward to the time when so devoutly-to-be-wished a consummation should take place, and England receive from the "Britain of the South" the largest portion of its importation of this staple? The present price of Russian hemp is about 33*l*. and of Riga flax 40*l*. per ton: now, if New Zealand flax can be supplied, equal, for all practical purposes, to the foreign article now used, at somewhere about 15*l*. per ton (after allowing for a large profit) it is impossible not to perceive that it must, in the course of time, force itself on the market, and become eventually the chief article of consumption. We think no one will deny the advantages to England from such a result.

But if this does not admit of a doubt, how much more certainly is it applicable to New Zealand! A new colony, in order to become really prosperous in the long run, must be possessed of some available resources of its own, by which it may export an equivalent to the value of its imports; otherwise it is clear that the fictitious prosperity engendered by the influx in the first instance of settlers possessed of more or less capital, would break down on a serious and continued interruption of the stream, because the capital would gradually—in a ratio to the balance of trade against the Colony—be consumed in payment of its imports. On the other hand, the creation of a staple export may be so successful as to more than cover the deficiency, and cause the balance to turn in its favour; in that case not only does the capital poured in by immigrants remain in the Colony, but an extraneous accumulation of wealth goes on at the same time, and the prosperity of the Colony is assured. Now, as New Zealand does not possess,—and will not probably for a length of time possess,—the means of exporting manufactures, we must look to its natural and indigenous productions for its actual resources. The flax presents such a resource. Inexhaustible in quantity, easy and inexpensive of cultivation, having the means of transport to England immediately and constantly at hand,—it offers precisely that resource which will be most available to New Zealand. Moreover, the foundation of a permanent and growing importation would go further to strengthen and perpetuate the favourable opinion entertained by the public at home of the advantages of New Zealand as a field for colonization, than perhaps any other circumstance. Even the establishment of a Loan Society, and the promotion of steam navigation, which are objects of the highest importance, and would undoubtedly be of the greatest advantage, to the Colony, would not have so beneficial an effect as success in calling into existence an extensive importation of its produce.

Nor should we omit,—among the gainers by rendering the *phormium tenax* an available article of commerce—the powerful association, to whose untiring exertions the colonization of New Zealand is undoubtedly attributable. The New Zealand Company has the strongest interest in the success of the scheme. It has already founded three great settlements, from which off-shoots are occasionally springing; and is still possessed of a vast territory, which will be gradually apportioned in new settlements. What would give greater value to that land than the establishment of a profitable export of its produce? What would ensure a larger measure of prosperity to the settlements already founded? What would tend more to enhance the value of the land already purchased of the Company and held by individuals? Again, the ships dispatched by the Company, instead of being compelled to make long and sometimes fruitless voyages in search of homeward freights, would at once be laden home: by this means the rates of freight outwards would be reduced, and we should have more frequent communication with the Colony. The increasing prosperity of the Company's settlements would occasion at once an impetus to emigration, and a demand for its land, at the same time that the value of that land would be greatly enhanced· by this means a large emigration fund would accrue, and the great question of the "peopling of New Zealand" would advance steadily towards solution. The Company would more fully accomplish the grand object of its incorporation, while it would reap—as it ought—corresponding pecuniary advantage.

On all these grounds, then, we emphatically call on every one interested in the welfare and prosperity of New Zealand to join in making an energetic and decided effort to establish an extensive and systematic cultivation of the *phormium tenax*. Confidently relying on the strength of the case we have made out, we leave to abler hands the task of determining on the measures for effecting an object of such national importance, as regards both the Colony and the mother-country.

No. I.

FLAX *and* TOW *imported into the United Kingdom from the year* 1831 *to* 1840, *inclusive.*

WHENCE IMPORTED.	YEARS.									
	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.	1839.	1840.
	cwts.	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*
Russia	623,256	667,868	776,855	562,815	438,483	1,037,021	682,025	1,089,559	705,708	870,401
Prussia	101,729	144,138	147,385	103,940	84,587	160,291	20,709	131,745	89,454	135,590
Holland	128,237	114,191	45,728	81,157	104,434	155,016	134,916	191,602	160,487	113,108
Belgium			89,628	39,426	72,731	119,259	118,298	153,423	180,531	80,748
France	56,324	31,512	27,147	7,904	16,192	26,119	39,557	53,493	78,607	43,295
Germany	7,615	8,104	34,221	7,704	11,792	6,973	3,227	3,593	2,637	8,105
Italy	1,475	697	17	595	693	26	33	46	302	746
Denmark	1,055	23	1,011	2,493	1,308	2,293	785	1,700	1,571	1,094
Sweden	....	....	....	95	9	176	1,253	....	2,189	....
Norway	....	28	....	....	....	....	....	....	....	....
Portugal	....	....	....	....	....	....	....	515	....	....
Spain	24	....	....	....	....	....	....	....	....	....
Gibraltar	....	....	10	....	....	....	....	....	12	19
Malta	251	....	....	....	....	....	....	....	....	....
Madeira	....	....	....	....	....	....	....	....	15	....
Brazil	....	....	2	1	....	1	....	....	....	....
Rio de la Plata	....	....	....	....	....	....	....	....	228	....
Chili	....	....	....	....	....	2	....	....	....	....
Egypt	....	44	....	....	....	....	30	....	1,755	12
Turkey	....	....	....	....	5	5	....	....	....	110
Tripoli, &c.	....	....	....	....	34	....	....	....	....	....
Western Africa	....	....	....	47	....	....	....	....	....	....
China	....	....	....	....	....	....	15	....	....	....
East Indies	....	1	....	....	....	....	5	3	15	....
United States	810	....	....	445	2,735	7	....	588	8	1
British North American Colonies	4	....	....	....	....	....	....	....	....	....
West Indies	....	....	1	....	....	....	12	....	....	....
British Settlements in Australia	15,725	15,867	7,397	4,997	7,812	1,828	....	9	....	....
New Zealand and South Sea Islands	890	....	230	....	....	99	....	....	....	....
Guernsey, &c.	16	37	....	95	....	....	....	....	18	11
Totals	936,411	982,510	1,129,632	811,714	740,815	1,529,116	1,000,865	1,626,276	1,223,700	1,253,240
Quantity retained for Home Consumption	918,883	984,868	1,122,190	794,272	728,143	1,511,428	993,654	1,615,905	1,216,811	1,256,322

No. II.

HEMP (*undressed*) *Imported into the United Kingdom, from the Year* 1831 *to* 1840, *inclusive.*

WHENCE IMPORTED.	YEARS.									
	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.	1839.	1840.
	cwts.	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*	*cwts.*
Russia	506,803	492,354	469,959	583,840	610,519	556,458	591,675	581,000	781,012	598,840
Prussia	1,417	1,974	3,776	3,741	1,691	608	33	619	5,033	1,634
Italy, &c.	7,405	32,948	16,378	30,921	18,926	4,784	3,126	4,950	14,691	6,622
Holland	249	....	....	....	492	248	508	316	285	909
Belgium			....	71	1,036	157	95	3,373	3,560	419
Germany	....	84	23	141	609	123	3	....	737	....
France	10	....	4	....	37	31	15	7,306	19,546	39
Denmark	9	....	513	....	....	2,128	....	200	346	257
Sweden	....	....	1,335	....	....	....	100	....	....	....
Spain and Portugal	....	3	....	....	....	148	....	977	....	1,955
Malta	....	99	....	....	....	....	....	....	....	....
Egypt and Turkey	....	....	36	....	8	4	....	....	36	30
Africa	2	25	78	42	85	....	....	....	....	....
St. Helena and Mauritius	....	....	....	154	163	....	....	....	....	144
East India Company's Territories and Ceylon	9,472	55,389	34,008	52,035	40,854	18,380	168,386	107,994	138,301	55,583
China	....	....	....	....	....	....	19	....	....	2,202
Islands in the Indian Seas, and Philippine Islands	2,262	9,550	99	2,821	9,554	2,677	1,847	23,411	28,832	15,431
South America	67	30	....	39	327	286	....	45	2	....
United States	2,248	24	1,241	....	3,157	....	5,347	110	2,226	....
Mexico	....	....	....	....	97	....	....	....	....	....
British West Indies and Hayti	11	....	1	....	....	....	1	....	....	3
British Settlements in Australia	....	740	....	....	....	....	....	....	6	....
Channel Islands	858	338	....	....	4	....	2,466	75	1,080	....
Totals	530,813	593,558	527,451	673,805	687,559	586,032	773,621	730,376	995,693	684,068
Retained for Home Consumption	504,308	708,646	512,623	666,096	643,122	567,892	651,613	733,378	908,735	711,397

FLAX IMPORTED AND RETAINED FOR HOME CONSUMPTION,

From 1831 to 1840, inclusive.

IMPORTED.		RETAINED FOR HOME CONSUMPTION.	
Flax	561,714 tons.	Flax	557,124 tons.
Hemp	339,149	Hemp	330,390 ,,
	900,863		887,514 tons.
Average 90,086 tons per annum		Average 88,751 tons per annum	

PRICES OF HEMP AND FLAX, OCTOBER, 1842.

HEMP:—	Riga Rhine	£33	0	to	£34	0
	Polish Rhine	34	0	,,	35	0
	Petersburg, clean	31	10	,,	33	0
	Sunn	17	10	,,	19	0
	Manilla	23	0	,,	24	0
	Bombay	19	0	,,	21	0
	Jute	15	15	,,	16	5
FLAX:—	Friezland	35	0	,,	48	0
	Riga	40	0	,,	42	0
	British	35	0	,,	46	0

⁂ The import duty on foreign hemp and flax is 1*d*. per cwt.